IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Giardino, David
Serial No.: 10/772,739
Filed: 5/10/04
Docket No.: CP-5144-US2
Group Art Unit: 3721
Examiner: Chukwurah, Nathaniel C.
Title: **MODULAR CONTROL APPARATUS FOR A POWER IMPACT TOOL**

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

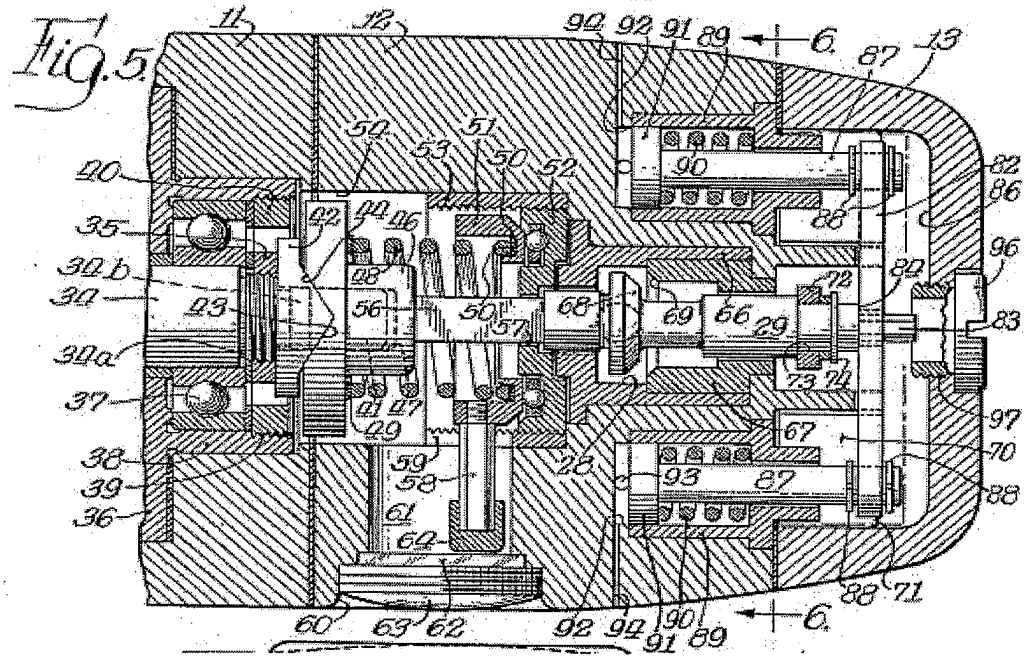
PRE-APPEAL BRIEF REQUEST FOR REVIEW

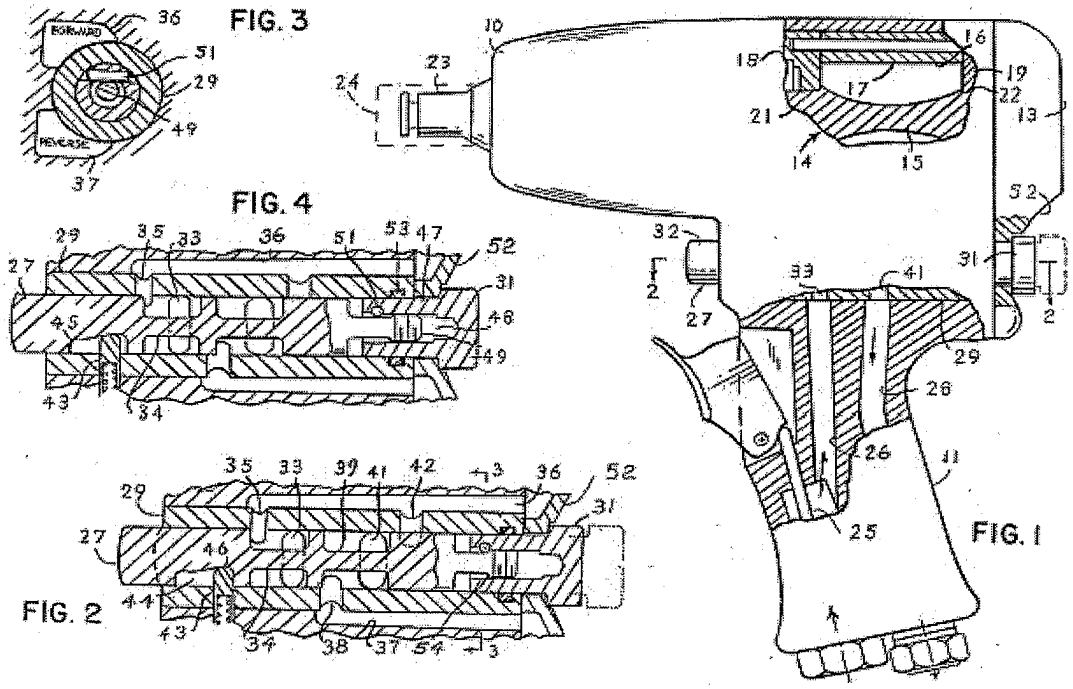
This pre-appeal brief request for review is being filed concurrently with a Notice of Appeal in response to the Final Office Action mailed on July 12, 2006. Applicant requests the above-identified application be reconsidered and allowed in view of the arguments that follow.

GROUNDS OF REJECTIONS AND ARGUMENTS

Issue 1- Whether claims 56-61 and 70-73 are patentable over US Patent No. 2,727,598 to Mitchell in view of US Patent No. 3,989,113 to Spring et al.

Applicant traverses the rejection of claims 56-61 and 70-73 as improper because the rejection fails to teach each and every element of the method claims and thus fails to form a prima facie case of obviousness. The Applicant's claimed invention requires fluid communication between the modular control apparatus 600 and the tool 10, the modular control apparatus 600 controlling timing and shutoff of torque that is applied by the tool 10. The Mitchell '598 patent does not teach, or suggest, each and every element of independent claims 56, 60 and 70 that require a **METHOD** of "**adjusting flow restriction with a valve** to control the timing and shut off of the modular control apparatus."





Rather, Mitchell teaches a spring loaded valve in mechanical communication with the tool that is thrust closed by impact from the workpiece at time zero, not the adjustment of a flow restrictor. (See Col. 5, lines 43-65) Mitchell teaches " **by threaded adjustment** of the ring 52 the **tension of the spring 48** against the inertia ring 46 **may be varied** so as to vary the desired degree of tightness at which **the torque limiting device may become operable**" (emphasis added) See Col. 5, lines 16-20. Therefore, Mitchell **teaches away** from the Applicant's method to adjust timing and shut off **by adjusting a flow restriction** with a valve as claimed by the Applicant. The '598 patent does not suggest or disclose adjusting the **METHOD** of using a flow restriction so as to control the output of the modular apparatus, the timing or the shut off, but instead it teaches changing spring tension to control shut off, it is a different method for a different device than the Applicant's.

The Spring '113 patent allegedly teaches that an adjustable valve is in communication with the tool, but the combination of teaching fails to produce the Applicant's claimed invention that **requires** "adjusting the flow restriction of the valve to control the output of the **modular control apparatus,**" NOT to control the tool, which is the job of the modular control apparatus. The Applicant's modular control apparatus controls both timing and motor shut off of the tool. The mere addition of a valve from the '113 patent to adjust the restriction of flow to the motor when combined with the teaching of the '598 patent DOES NOT control the output of the modular apparatus with no effect controlling timing and shutoff.

The Spring '113 control valve teaches in column 4, line 13 that "*the control valve the body of the*

valve will partially cover the forward outlet port 35 leading to the forward side of the motor. Accordingly, the volume air flow from the inlet port 33 around the groove 34 will be ***restricted*** *in passing through port 35, thus resulting in a* ***limited torque*** *being applied to the work in the forward direction.*" Thus the valve directly restricts flow to the motor and is **NOT** controlling the flow of the output of the control modulus claimed by the applicant and no control of the shut off point. The combination of the Spring '113 valve with the mechanism of the Mitchell '598 patent still fails to teach a valve in control of the OUTPUT of a modular control apparatus that would still need to rely upon the inertia ring and adjusting spring tension for adjusting shut off NOT the applicant's claimed invention.

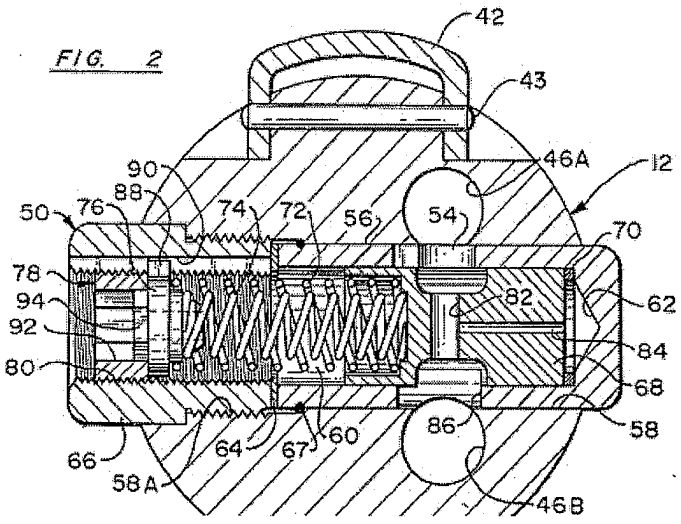
In other words, the combination of the Mitchell and Spring references would **STILL** provide a wrench having a modular control apparatus where shutoff and timing would be controlled by the tensioning of the spring. The rejection is improper because it is a METHOD of using the applicant's control apparatus, which even if the rejection of the apparatus was proper (it is not) it works in a different manner and the applicant's method of using the control apparatus would not be useful with the apparatus produced by the cited art. The addition of a valve from the '113 patent to control the peak motor torque by restricting flow to the motor would fail to provide for a shutoff when peak torque was achieved, let alone adjusting the shut off unless the inertia ring was still present. The removal of the inertia ring prevents the tool from being shutoff after a determined torque and time, and therefore its presence is still required. Thus, the combination is improper because the actions of the components are contrary to each other and teaches away from the invention in claims 56, 60 and 70. The applicant respectfully requests reconsideration and removal of the rejection of claims 56-61 and 70-73 in view of the above deficiencies.

Issue 2- Whether claims 56-61 and 70-73 are patentable over US Patent No. 3,989,113 to Spring et al in view of US Patent No. 4,434,858 to Whitehouse

Applicant traverses the rejection of claims 56-61 and 70-73 as improper because the rejection fails to teach each and every element of the claims. With regard to the teaching of the Spring '113 patent there is no modular control apparatus present at element (13) as alleged by the examiner, but to the contrary, the reference actually teaches at column 2, line 21 "*supported in the housing adjacent the inner face of a* ***cap or cover section 13 of the housing*** *is a motor assembly 14 of a conventional reversible rotary air driven vane type.*" As such, there is no modular control apparatus of any nature present in the Spring '113 patent except the restrictor valve itself that merely limits flow. As discussed above the Examiner alleges that "*valve (27) in fluid communication with the tool (10), aligning, attaching (See Fig. 1) and adjusting the flow restriction with the valve (27) to control the output of the modular control (see col. 3, lines 31-43)*" is contrary to the actual operation of the devices. The Spring '113 patent at Col. 3, lines 31-43 actually teaches:

*Adjustable means, as will now be described, is provided to reduce or adjust the effective length of the **control valve** so as to enable it to obtain a limited or less than its full forward position, in which limited position **a restricted volume air flow will be applied to the forward side of the motor** and, as a consequence, a lesser or limited torque will be applied to the work. This **limited or less than full torque application** is desired in various situations, such as when it is desired to apply a limited or less than full torque in tightening the lug bolts in automotive disc brake applications. This adjustable means includes the knob 31 and its cooperative association with the control valve 27.*

The control valve of the Spring '113 patent valve teaches DIRECT restriction of airflow to the motor thereby reducing motor torque, but not controlling the output of the **modular control apparatus required in the claims**, which is NOT present in the Spring reference because there is no control device present to control. The '113 patent teaches just reduction of peak torque, but it does NOT prevent an over-torque condition since it is just a restrictor absent any other function. The absence of the modular control apparatus does not allow for controlling of the torque or motor shut off as admitted by the examiner (pg. 6 final OA). The Whitehouse '858 patent is inappropriately combined with the Spring '113 patent to allegedly teach the feature of motor shutoff.



The Whitehouse '858 patent reference teaches at column 4, line 54 that "*for quick and easy **adjustment of the stall pressure** and accordingly the stall torque to meet the characteristics of different applications of tool 10, **the biasing force of springs 72, 74 may be adjusted** to a desired compression setting by the above mentioned lock mechanism 78.*" (Emphasis added) The Whitehouse '858 patent teaches the adjustment of spring tension to control the stall pressure (shutoff) of the motor. Therefore the adjustment of the restrictor valve taught by the '113 patent would have no effect on the "adjustment of the stall pressure" or shut off of the '858 patent.

Applicant's independent METHOD claim 56 requires "*adjusting the flow restriction with the valve to **control the output of the modular control apparatus***." Independent claim 60 requires "*adjusting the flow rate of a valve by setting a valve position **to control** the pneumatic modular control apparatus*" where the apparatus is "*configured to shut off air flow.*" Independent claim 70 requires "*providing a **modular control apparatus** having an alignment mechanism for aligning the modular control apparatus with a tool, wherein said **apparatus is configured to shut off air flow** to the tool after a selected time that torque is being*

applied by the tool ***controlled by a valve*** *in fluid communication with the tool*" where "*varying the flow restriction of the valve* ***to control*** *the output of the modular control apparatus.*" Independent claims 56, 60 and 70 require the valve to be adjustable to control the torque and shut off the tool, which the combination of the '113 and '858 references fails to teach because SPRING TENSION controls the point of shut off. The combination of the teachings of the Spring '113 patent with the Whitehouse '858 patent would provide a tool having the NON-modular control apparatus of the '858 patent where the time and torque shutoff is adjusted by changing the spring tension. The teaching of the Spring '113 patent would place a valve between the air source and the motor to limit the air pressure to the motor to reduce torque BUT adjustment of the valve would have no effect on either the timing or the torque shut off to the tool as it would never shut off.

The rejected claims are methods of using the applicant's control apparatus. The applicant's claimed method is not taught by the art combination as the only method of changing the shutoff is with changing the spring tension contrary to the applicant's claimed method. The failure to address the required limitations of the adjustment of the valve acting upon the control apparatus output to determine shutoff and timing thus fails to teach each and every element of the claims. The applicant respectfully request reconsideration and removal of the rejection of claims 56-61 and 70-73, which should be allowed.

CONCLUSION

Based on the preceding proposed amendments, Applicant respectfully submits that claims 56-61 and 70-73 along with the entire application meet the acceptance criteria for allowance and therefore request favorable action. If an extension of time is required the Commissioner is hereby authorized to charge deposit account 19-0513 for any extensions or fees required.

Date: November 13, 2006

Respectfully submitted,

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